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EXAMINER

NGUYEN, DUSTIN

ART UNIT PAPER NUMBER

2154

DATE MAILED: 08/12/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.

09/261,621

Applicant(s)

VAHALIA ET AL.

Examiner

Dustin Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 1 – 50 are presented for examination.

Allowable Subject Matter

2. Claims 9, 10, 28, and 29, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 6,324,581 [hereinafter as

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‘581 patent]. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are claiming common subject matter as follow:

Taking claim 21 as an exemplary claim, the ‘581 patent contains the subject matter claimed in the instant application. As per claim 1, both applications are claiming common subject matter, as follows:

a file server comprising:

at least one data storage ...; and

a data mover computer ...;

wherein the data storage device ...; and

wherein the data mover

The claims of ‘581 patent do not specifically state the client sends the data access command to the data storage device over a data transmission path that bypasses the data mover computer as described in the claim 1 of instant application but it would have been obvious to a person skill in the art to recognize that the two set of claims are similar because the first data mover computer sends the data access command to the data storage device over a data transmission path that bypasses the second data mover computer of the ‘581 patent would allow the second data mover to view the first data mover as one of its client and also bypassing the data mover would allow quicker access to information in the storage system.

As per independent claims 1, 8, 27, 36, 42 and 50, they are also directed to the same subject matter recited in claim 21 above. Accordingly, they are provisionally rejected under the judicially created doctrine of obviousness-type double patenting.

As per dependent claims 2-7, 9-20, 22-26, 28-35, 37-41, 43-49, they are depending on rejected claims, they are provisionally rejected under the judicially created doctrine of obviousness-type double patenting.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 11-20, 27, 30-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasue [US Patent No 6,289,345], in view of Schmuck et al. [US Patent No 6,032,216].

6. As per claim 1, Yasue discloses the invention substantially as claimed including a method of operating a file server in a data network, said method comprising:

the file server receiving a request for metadata about a file to be accessed [i.e. acquire information] [Abstract], the request being received from a data processing device in the data network [(a), Figure 8; col 4, lines 16-25; and col 7, lines 44-51]; and

returning to the data processing device metadata of the file including information specifying data storage location in the file server for storing data of the file [(b), Figure 8; col 2, lines 36-43; and col 7, lines 44-51].

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St. John Herbert does not specifically disclose

in response to the request for metadata, the file server granting to the data processing device a lock on at least a portion of the file.

Schmuck discloses

in response to the request for metadata, the file server granting to the data processing device a lock on at least a portion of the file [col 33, lines 37-57].

It would have been obvious to a person skill in the art at the time the invention was made to combine Yasue and Schmuck because Schmuck's locking mechanism would provide efficient basic file control in a shared disk environment for multiple computers [Schmuck, col 3, lines 50-57].

7. As per claim 2, St. Yasue discloses the data storage locations, and a data mover computer [10, 20, Figure 8], wherein the data storage device stores metadata of a plurality of files having file data stored in the data storage device [10, Figure 1], the data mover computer is coupled to the data storage device for transfer of the metadata between the data storage device and the data mover computer [Figure 4; and col 5, lines 65-col 6, lines 15], the data mover computer has a random access memory [Figure 3B; and col 5, lines 47-64]. Yasue does not specifically disclose data mover computer for managing locks on files having data stored in said data storage device, and the method includes the data mover computer maintaining a metadata cache in the random access memory, and the method includes the data mover computer accessing the metadata cache for obtaining the metadata that is returned to the data processing device. Schmuck discloses data mover computer for managing locks on files having data stored in said

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data storage device [Figure 1; and col 30, lines 28-40], and the method includes the data mover computer maintaining a metadata cache in the random access memory [col 30, lines 41-48], and the method includes the data mover computer accessing the metadata cache for obtaining the metadata that is returned to the data processing device [col 3, lines 40-48; and col 8, lines 58-60]. It would have been obvious to a person skill in the art at the time the invention was made to combine Yasue and Schmuck because Schmuck's teaching of data mover would increase the access time.

8. As per claim 3, Schmuck discloses a plurality of data processing devices in the data network share read-write access to the file [i.e. shared disks] [Abstract], and the file server grants respective read locks and write locks to the data processing devices in the data network [Abstract; and col 3, lines 40-48].

9. As per claim 4, St. Yasue discloses the data processing device writes data to the data storage locations in the file server [i.e. update] [col 2, lines 51-67], modifies the metadata from the file server in accordance with the data storage locations in the file server to which the data is written [col 4, lines 45-56], and sends the modified metadata to the file server [col 3, lines 11-21].

10. As per claim 5, Yasue discloses the data processing device sends the modified metadata to the file server after the data processing device writes the data to the data storage of the file server [col 10, lines 22-29].

11. As per claim 6, Yasue does not disclose the data processing device has a cache memory for caching the metadata of the file including a version identifier associated with the metadata of the file, and wherein the data processing device includes the version identifier in the request for access to the file, the file server compares the version identifier from the data processing device to a version identifier of a most recent version of the metadata of the file, and the file server returns the most recent version of the metadata of the file to the data processing device when the comparison of the version identifier from the data processing device to the version identifier of the most recent version of the metadata of the file indicates that the metadata of the file cached in the cache memory of the data processing device is not the most recent metadata of the file.

Schmuck discloses the data processing device has a cache memory for caching the metadata of the file including a version identifier associated with the metadata of the file, and wherein the data processing device includes the version identifier in the request for access to the file, the file server compares the version identifier from the data processing device to a version identifier of a most recent version of the metadata of the file, and the file server returns the most recent version of the metadata of the file to the data processing device when the comparison of the version identifier from the data processing device to the version identifier of the most recent version of the metadata of the file indicates that the metadata of the file cached in the cache memory of the data processing device is not the most recent metadata of the file [col 42, lines 10-32]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Yasue and Schmuck because Schmuck's teaching of versioning would allow to maintain data integrity.

12. As per claim 7, St. Schmuck discloses the version identifier is a number that is incremented when the metadata of the file is modified [i.e. update version] [col 43, lines 27-32].

13. As per claim 8, it is rejected for similar reasons as stated above in claim 1. Furthermore, Yasue discloses the client receiving from the file server the metadata of the file, using the metadata of the file to produce at least one data access command for accessing the data storage locations in the file server, and sending the data access command to the file server to access the data storage locations in the file server; and the file server responding to the data access command by accessing the data storage locations in the file server [Figure 8; and col 9, lines 61-67].

14. As per claim 11, it is rejected for similar reasons as stated above in claim 3.

15. As per claim 12, St. Yasue does not specifically disclose the lock on at least a portion of the file granted by the file server to the client is not granted to any particular application process of the client, and wherein the client has a lock manager that grants a local file lock to a particular application process that accesses the file. Schmuck discloses the lock on at least a portion of the file granted by the file server to the client is not granted to any particular application process of the client, and wherein the client has a lock manager that grants a local file lock to a particular application process that accesses the file [col 32, lines 13-19]. It would have been obvious to a

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person skill in the art at the time the invention was made to combine the teaching of Yasue and Schmuck because Schmuck's teaching of locking file would allow to access data in a more efficient manner.

16. As per claim 13, Schmuck discloses the client has a lock manager that responds to a request from an application process of the client for access to the file by granting to the application process a local file lock on at least a portion of the file; and then sending to the file server said at least one request for access to the file [col 32, lines 53-59].

17. As per claim 14, it is rejected for similar reasons as stated above in claim 8. Furthermore, Yasue discloses dynamically linking application programs of the client with input-output related operating system routines of the client [i.e. component] [Figure 2; and col 5, lines 1-11].

18. As per claim 15, it is rejected for similar reason as stated above in claim 4.

19. As per claim 16, they are rejected for similar reasons as stated above in claim 5.

20. As per claim 17, Yasue does not specifically disclose the client performs asynchronous write operations upon the data storage locations of the file server, and wherein the client sends the modified metadata to the file server in response to a commit request from an application process of the client. Schmuck discloses the client performs asynchronous write operations upon the data storage locations of the file server, and wherein the client sends the modified metadata

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to the file server in response to a commit request from an application process of the client [col 29, lines 41-56]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Yasue and Schmuck because Schmuck's teaching would provide updating information to maintain its integrity.

21. As per claim 18, Schmuck discloses the client performs asynchronous write operations upon the data storage locations of the file server, and wherein the client sends the modified metadata to the file server when the client requests the file server to close the file [col 42, lines 4-10].

22. As per claims 19 and 20, they are rejected for similar reasons as stated above in claims 6 and 7.

23. As per claim 27, it is apparatus claimed of claims 1 and 8, it is rejected for similar reasons as stated above in claims 1 and 8.

24. As per claim 30, it is apparatus claimed of claim 3, it is rejected for similar reason as stated above in claim 3.

25. As per claims 31-34, they are apparatus claimed of claims 12-15, they are rejected for similar reasons as stated above in claims 12-15.

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26. As per claim 35, it is apparatus claimed of claim 6, it is rejected for similar reason as stated above in claim 6.

27. As per claim 36, it is program product claimed of claim 1, it is rejected for similar reason as stated above in claim 1. Furthermore, Yasue discloses at least one network port for exchange of control information and metadata of files in the file system with at least one data processing device [Figures 1 and 2].

28. As per claim 37, it is program product claimed of claim 4, it is rejected for similar reason as stated above in claim 4.

29. As per claims 38 and 39, they are rejected for similar reasons as stated above in claim 2.

30. per claims 40 and 41, they are rejected for similar reasons as stated above in claims 6 and 7.

31. As per claim 42, it is rejected for similar reasons as stated above in claim 8.

32. As per claims 43-45, they are rejected for similar reasons as stated above in claims 13-15.

33. As per claims 46-48, they are rejected for similar reasons as stated above in claims 16-18.

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34. As per claim 49, it is rejected for similar reasons as stated above in claim 6.

35. Applicant's arguments with respect to claims 1-50 have been considered but are moot in view of the new ground(s) of rejection.

36. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dustin Nguyen whose telephone number is (703) 305-5321. The examiner can normally be reached on Monday – Friday (8:00 – 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703) 305-8498.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directly to the receptionist whose telephone number is (703) 305-3900.

Dustin Nguyen



**JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**